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(54) Title: **ASSAY METHOD**

(57) **Abstract:** The invention provides an assay method for detecting fungal infection of soil or vegetables by pathogenic fungal species, in particular *M. acerina*, *F. carotae* and *Pythium* species, said method comprising: obtaining a sample of soil or vegetable; treating said sample to lyse fungal cells therein; using an oligonucleotide primer pair, effecting a polymerase chain reaction on DNA released by lysis of the fungal cells; and detecting DNA fragments generated by said polymerase chain reaction; wherein said primer pair comprises an 18- to 24-mer having the ability to hybridize to one of the oligonucleotide sequences of formulae (Ia), (Ib), (IIa), (IIb), (IIIa), (IIIb), (IVa), (IVb), (Va), (Vb), (VIa), (VIb), (VIIa), (VIIb), (VIIIa), (VIIIb), (IXa), (IXb), (Xa), (Xb), (XIa), (XIb), (XIIa), (XIIb), (XIIIa), (XIIIb), (XIVa) and (XIVb).